

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052267 A1

(51) International Patent Classification:
H02K 11/00 (2006.01) **H02K 21/12** (2006.01)

(21) International Application Number:
PCT/US2005/003477

(22) International Filing Date: 28 January 2005 (28.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-019748 28 January 2004 (28.01.2004) JP

(71) Applicants (for all designated States except US): **INOKI, Kanji** [JP/US]; 104 West 40th Street, #1510, New York, NY 10018 (US). **INTERNATIONAL NATURAL POWER INSTITUTE OF TECHNOLOGY CO., LTD.** [JP/JP]; 1-2-8 Shibadaimon, Cosmic Building, 5th Floor, Minato-ku, Tokyo 105-0012 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KINOSHITA, Yukio** [JP/JP]; International Natural Power Institute of Technology Co. Ltd., 1-2-8 Shibadaimon, Cosmic Building, 5th Floor, Minato-ku, Tokyo 105-0012 (JP).

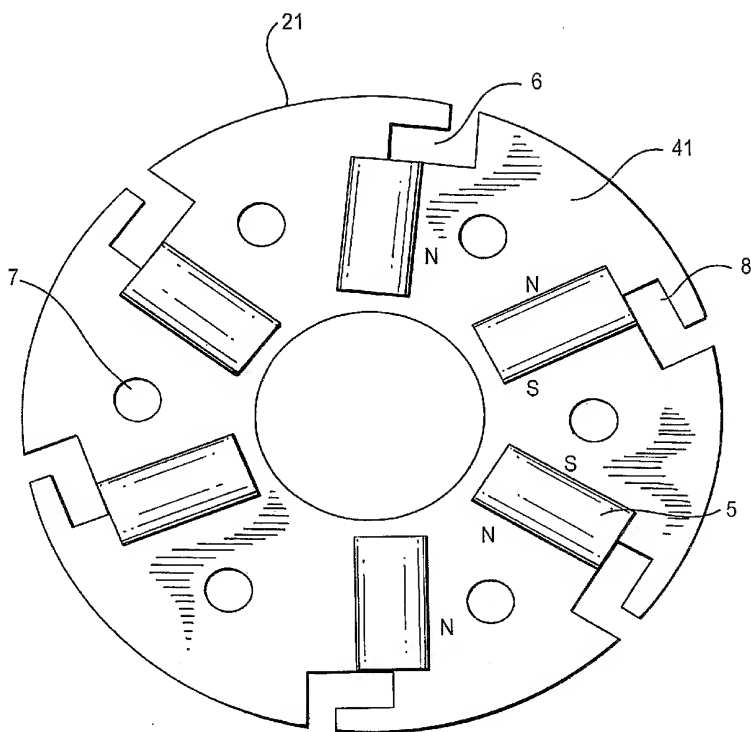
(74) Agent: **GULBIN, John, F.**; 7 Times Square, New York, NY 10036-7311 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: ELECTRICAL ROTARY MACHINE AND ELECTROMAGNETIC APPARATUS



(57) Abstract: A permanent magnet rotor (Figure 2) includes a rotor core (41) and permanent magnets (5). The permanent magnet rotor is also formed with grooves (6) in order to reduce magnetic flux leakage.

WO 2006/052267 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.